Hemolysis
Destruction of red blood cells releases hemoglobin and other substances such as potassium into the surrounding plasma. This can cause interference in many laboratory tests. *In vitro* hemolysis usually occurs when there is difficulty/poor technique in obtaining a blood specimen.

Clotting
If flow of blood during collection is very slow, or tubes are not mixed immediately afterwards, the clotting process begins. Once begun, it cannot be reversed. Conversely, once a sample is properly anticoagulated, clotting will *never* occur. Clotted samples may not be used for tests that require anticoagulated whole blood.

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**Four Tips for Improved Pediatric Sample Quality**

1. **Warm the Heel**
   - Increases flow of blood which decreases clotting and hemolysis.

2. **Wait After Alcohol**
   - The skin at the draw site should be completely dry. Wait one minute after prepping the skin before starting the collection.

3. **Wipe Away First Drop**
   - The first drop is almost always hemolyzed and contains clotting activators. Wipe away the first drop before collection.

4. **Mix Purple Tops Frequently**
   - Collect a few drops of blood, cap the tube and mix by inversion. Collect another few drops and cap and mix again. Finish the collection and mix again.